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10/670,325	09/26/2003	Yong-geun Kim	1349.1289	5088

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EXAMINER

SINGH, SATWANT K

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2625

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/670,325

Applicant(s)

KIM, YONG-GEUN

Examiner

Satwant K. Singh

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 08/29/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, and 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. (US 7,164,486).

3. Regarding Claim 1, Nakamura et al discloses an image forming apparatus (image editing system 100) performing a printing operation with respect to printing data transmitted from an external device (Fig. 2, image forming apparatus 10) (print outputting processing of image data) (col. 13, lines 8-16), the image forming apparatus comprising: a printing engine unit performing the printing operation with respect to the printing data (Fig. 2, image outputting part 13) (col. 14, lines 8-33); a printing control unit connectable to the external device, controlling the printing engine unit to perform the printing operation with respect to the printing data transmitted from the external device (Fig. 3, image processing core 12A) (col. 20, lines 18-33); and an image processing unit removably disposed in the image forming apparatus, transforming the printing data transmitted from the external device to image data to be processed by the printing

engine unit (image processing part 12) (col. 13, lines 35-52) (expansion box 50) (col. 13, lines 53-67, col. 14, lines 1-7); wherein the image processing unit is connected to the printing control unit through a local BUS when the image processing unit is mounted in the image forming apparatus (high speed bus interface 20) (col. 14, lines 34-59).

4. Regarding Claim 2, Nakamura et al disclose an image forming apparatus, wherein the printing control unit controls the printing engine unit to perform the printing operation with respect to data that is image-processed and transmitted from the external device in response to the image processing unit not being mounted in the image forming apparatus (expansion box 50) (col. 13, lines 53-67, col. 14, lines 1-7).

5. Regarding Claim 3, Nakamura et al disclose an image forming apparatus, wherein the image processing unit comprises: a first interface transmitting/receiving the printing data to/from the external device (Fig. 3, selection part 12B) (col. 20, lines 18-33); a central processing unit controlling general operations of the image forming apparatus (Fig. 3, image processing core 12A) (col. 20, lines 18-33); and a storage portion storing a control program to control the image processing unit and the image data that is generated during the image processing (RAM 52) (col. 15, lines 33-41).

6. Regarding Claim 4, Nakamura et al disclose an image forming apparatus, wherein the image processing unit transforms the printing data to the image data to be processed by the printing engine unit upon receipt of the printing data from the external device through the first interface (Fig. 3, selection part 12B) (col. 20, lines 18-33), and outputs the transformed image data to the printing control unit (Fig. 3, to image outputting part 13) (col. 20, lines 18-33), and the printing control unit controls the

printing engine unit to perform the printing operation with respect to the image data transformed and transmitted from the image processing unit (Fig. 3, image processing core 12A) (col. 20, lines 18-33).

7. Regarding Claim 5, Nakamura et al disclose an image forming apparatus, wherein the storage portion comprises a ROM storing the control program of the central processing unit (Fig. 1, ROM 53) (col. 15, 42-47).

8. Regarding Claim 5, Nakamura et al disclose an image forming apparatus, wherein the storage portion comprises a RAM temporarily storing the data generated during the image processing (RAM 52) (col. 15, lines 33-41).

9. Regarding Claim 11, Nakamura et al disclose an image forming apparatus, wherein the printing engine unit comprises a mechatronics portion and a printing engine portion (image outputting part adopts an electrophotography process system) (col. 14, lines 8-33).

10. Regarding Claim 12, Nakamura et al disclose a driving method of an image forming apparatus performing a printing operation with respect to printing data transmitted from an external device, the driving method comprising: detecting whether an image processing unit is mounted in the image forming apparatus (high speed bus interface 20) (col. 14, lines 34-45), wherein the image processing unit transforms the printing data to image data to be processed by a printing engine unit performing the printing operation (Fig. 3, image processing core 12A) (col. 20, lines 18-33); controlling the image processing unit to transform the printing data transmitted from the external device to the image data in response to the image processing unit being mounted in the image

forming apparatus (Fig. 2, image processing part 12) (col. 13, lines 30-47), and outputting the transformed data to a printing engine unit (Fig. 3, to image outputting part 13) (col. 20, lines 18-33); and controlling the printing engine unit to perform the printing operation with respect to the image data received Fig. 3, image processing core 12A) (col. 20, lines 18-33).

11. Regarding Claim 13, Nakamura et al disclose a driving method, wherein the controlling the printing engine unit to perform the printing operation with respect to the image data received comprises receiving the image data image-processed and transmitted from the external device in response to the image processing unit not being mounted in the image forming apparatus (expansion box 50) (col. 19, lines 19-37).

12. Regarding Claim 14, Nakamura discloses a driving method, wherein the detecting whether the image processing unit is mounted in the image forming apparatus is performed by a sensor disposed at a position in which the image processing unit is mounted (high speed bus interface 20) (col. 14, lines 34-45).

13. Regarding Claim 15, Nakamura discloses a driving method, wherein the detecting whether the image processing unit is mounted in the image forming apparatus is performed by a signal communication in a local BUS, wherein the image processing unit is connected to the image forming apparatus through the local BUS (high speed bus 22) (col. 14, lines 34-59).

14. Regarding Claim 16, Nakamura et al disclose an image forming apparatus performing a printing operation with respect to data transmitted from an external device, the image forming apparatus comprising: a printing control unit (Fig. 3, image

processing core 12A) (col. 20, lines 18-33); and a removable image processing unit transforming the data transmitted from the external device and transmitting the data to the printing control unit (expansion box 50) (col. 13, lines 53-67, col. 14, lines 1-7); wherein the printing control unit is connectable to the image processing unit and the external device (Fig. 2, high speed bus 22), and receives image processed data directly from the external device in response to the absence of the removable image processing unit (image processing performed in the image processing part without leaving them to the expansion box side) (col. 13, lines 53-55).

15. Regarding Claim 17, Nakamura et al disclose an image processing unit (expansion box 50) of an image forming apparatus, the image processing unit comprising: an interface for transmission/reception of data with the external device (Fig. 3, network 80); a central processing unit controlling the image forming apparatus (CPU 51) (col. 15, lines 20-26); and a storage portion storing a program to control the central processing unit and data generated during image processing (RAM 52) (col. 15, lines 33-41); wherein the image processing unit is removable from the image forming apparatus (expansion box replaceably externally connected to the apparatus) (col. 13, lines 9-16).

16. Regarding Claim 18, Nakamura et al disclose an image forming system, comprising: an external device (print outputting processing of image data) (col. 13, lines 8-16); and an image forming apparatus (image editing system 100) comprising: a printing control unit (Fig. 2, image outputting part 13) (col. 14, lines 8-33), and a removable image processing unit (expansion box 50) (expansion box replaceably

externally connected to the apparatus) (col. 13, lines 9-16) transforming data transmitted from the external device and transmitting the data to the printing control unit, wherein the printing control unit is connectable to the image processing unit and the external device, and receives image processed data directly from the external device in response to the absence of the removable image processing unit (image processing part supplies the image data of the output system data format) (col. 19, lines 19-37); wherein image forming system operates with or without the removable image processing unit (image forming apparatus may be operable in the stand-alone environment) (col. 15, lines 10-19).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Ackerman et al. (US 6,647,437).

19. Regarding Claim 7, Nakamura et al fail to teach an image forming apparatus, wherein the storage portion comprises an EEPROM storing image processing unit control data, and managing a control establishment value.

Ackerman et al teach an image forming apparatus, wherein the storage portion comprises an EEPROM storing image processing unit control data, and managing a

control establishment value (non-volatile ram is most likely an EEPROM integrated circuit chip) (col. 6, lines 33-46).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nakamura with the teaching of Ackerman to use anon-volatile RAM such as an EEPROM for storage.

20. Regarding Claim 8, Nakamura et al teach an image forming apparatus, wherein the storage portion comprises: a ROM storing the control program of the central processing unit (Fig. 1, ROM 53) (col. 15, 42-47); a RAM temporarily storing the data generated during the image processing (RAM 52) (col. 15, lines 33-41).

Nakamura et al fail to teach an image forming apparatus, wherein the storage portion comprises: an EEPROM storing image processing unit control data, and managing a control establishment value.

Ackerman et al teach an image forming apparatus, wherein the storage portion comprises: an EEPROM storing image processing unit control data, and managing a control establishment value (non-volatile ram is most likely an EEPROM integrated circuit chip) (col. 6, lines 33-46).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nakamura with the teaching of Ackerman to use anon-volatile RAM such as an EEPROM for storage.

21. Regarding Claim 9, Nakamura et al fails to teach an image forming apparatus, wherein the printing control comprises a second interface that connects the printing control unit to the external device.

Ackerman et al to teach an image forming apparatus, wherein the printing control comprises a second interface that connects the printing control unit to the external device (USB port) (vol. 2, lines 28-41).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nakamura with the teaching of Ackerman to use a USB port to communicate with an external device.

22. Regarding Claim 10, Nakamura et al fails to teach an image forming apparatus, wherein the second interface comprises a USB unit.

Nakamura et al teach an image forming apparatus, wherein the second interface comprises a USB unit (USB port) (vol. 2, lines 28-41).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nakamura with the teaching of Ackerman to use a USB port to communicate with an external device.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Silverbrook et al. (US 6,553,459) discloses a memory module useful in a digital imaging system such as a compact printer system.

Yamazaki et al (US 6,563,603) discloses an image processor, image forming apparatus, image forming system comprising these apparatuses.

Yamamoto (US 6,618,061) discloses an input display device and method for switching the processing functions displayed in a plurality of display areas.

Katahira (US 6,725,323) discloses an apparatus and method for updating flash ROM in an electronic apparatus having a plurality of boards.

Kobayashi (US 2002/0004870) discloses a method and apparatus for multi-function processing capable of performing a program downloading using a common single connection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satwant K. Singh whose telephone number is (571) 272-7468. The examiner can normally be reached on Monday thru Friday 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



sks

Satwant K. Singh
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